

FILTER MATERIALS - 1708

Staff of six

Personnel Training: Polymer chemistry, surface chemistry and surface physical chemistry

Objective: Search out new materials for filter systems and new methods for treating rod to remove less desirable elements from smoke, to add flavor and aroma to smoke, and to reduce the processing costs for cigarette production.

Program:

- (Goal 1) 1. Copper amine complex (Stoichiometric) → HCN removal
- (Goal 1) 2. Cobalt/alumina (Catalytic) → CO removal
- (Goal 1) 3. Permanganate/alumina (Stoichiometric) → NO<sub>x</sub>, HCN, aldehyde removal
- (Goal 1) 4. Chlorite/alumina (Stoichiometric) → NO<sub>x</sub> removal
- (Goal 2) 5. MP-PVC (also in paper filter as carrier for MP) → TPM Reduction
- (Goal 2) 6. Factice → TPM reduction, CP cigarette
- (Goal 3&5) 7. Systems for controlled release of menthol and other flavors
  - a. grafting to cellulose
  - b. treatment of cellulose with cryogenic NH<sub>3</sub>
- (Goal 2&4) 8. Carbon fiber filler in rod → reduced delivery and cost reduction
- (Goal 6) 9. Compounds added to filler → CO reduction
- (Goal 6) 10. Chemical modification of smoking materials for improved flavor.

Project Leader: Dr. N. B. Rainer, Senior Professional  
Dr. C. G. Dodd, Associate Principal  
Dr. C. B. Hoelzel, Research Professional  
Dr. A. J. Kassman, Associate Professional  
Mr. D. A. Full, Assistant Professional  
Mr. P. A. Wilson, Specialist  
Plus one professional and one specialist to be recommended for hiring by 1973.  
Plus outside laboratory services - \$3,500.

Goals:

- 1. Selective filtration
- 2. 10 mg Marlboro
- 3. Menthol cigarette
- 4. Processing cost reduction
- 5. New products
- 6. Selective delivery

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